State of Utah

Department of
Natural Resources

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May 14, 2004

TO: File

FROM: Paul Baker, Senior Reclamation Biologist

SUBJECT: Site Inspection, Molycorp, Small Fry Mine, M/037/022, San Juan County, Utah

Date of Inspection: May 11, 2004
Time of Inspection: About 8:30 a.m.
Conditions: Mostly cloudy, 60's, windy
Participants: Ray Cherniske, Molycorp; Paul Baker, DOGM

**Purpose of Inspection:**

The site was seeded in 2003, and we wanted to see how vegetation is progressing.

**Observations**:

Vegetation is coming along very well on the road to the vent shaft (Photo 7) and in the areas on top of the plateau where power lines were removed. There was not a lot of disturbance in these areas, so the native soils are still present.

In the area of the vent shaft, much of the material on the surface appears to have come from the shaft, and it includes a gray shale. A few plants have become established in this area, but not a lot (Photo 6).

At the main mine site, revegetation success is spotty with a lot of plants in some places and very few in others (Photo 5). Areas where shale is on the surface have had the poorest success so far. We found hundreds of rabbitbrush seedlings which, if they can become established and continue to grow, will provide a lot of cover in a few years. We also found a fair amount of fourwing saltbush and blue flax along with the grasses. It is still not easy to tell some of the annual grain plants from the perennial grasses.

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On the edge of the plateau above the south part of the mine, there is an area where a berm was built (Photo 4) in an apparent attempt to keep runoff from eroding a portion of the slope above the mine (Photo 2). The berm has been breached (Photo 3), possibly intentionally, and a small gully has formed leading to the mine site. Although one can see where runoff crosses the pad and continues down the hill, this erosion is not too serious.

We believe there were about four openings into the side of the hill, but only about two of these were adits going in to the mine. These openings were backfilled but not sealed with block walls. It appears the material that was backfilled against the highwall has been settling, and the top has pulled away from the rock (Photo 1). I looked in to this crack between the rock and backfill material but could see no farther than about a foot. I am not certain whether these cracks extend into the mine or office or shop facilities.

**Conclusions and Recommendations:**

I believe the vegetation will continue to progress, and it is likely it will meet release criteria after the 2005 growing season. This will, of course, depend to a large degree on the weather, but if the rabbitbrush seedlings can become established, they should boost the vegetation cover values.

I'm not terribly concerned about the gully coming down from the top of the plateau to the south part of the mine site. It looks like it's been there for several years and has caused little damage.

We definitely need to watch the portal area and see whether the cracks open any more, particularly if they open into the mine. If this happens, remedial action will be necessary.

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**ATTACHMENT**
**Photographs**
**M/037/022, Small Fry Mine, Molycorp**
Inspection Dated: May 11, 2004; Report Dated: May 14, 2004


**Photo 1. Fill is pulling away from the areas of the backfilled portals.**


**Photo 2. Erosion in a drainage on the south end of the site.**


**Photo 3. Breach in the berm at the top of the gully in Photo 2.**


**Photo 4. Berm at the top of the slope in Photo 2.**


**Photo 5. Revegetation on the pad in front of the portals.**

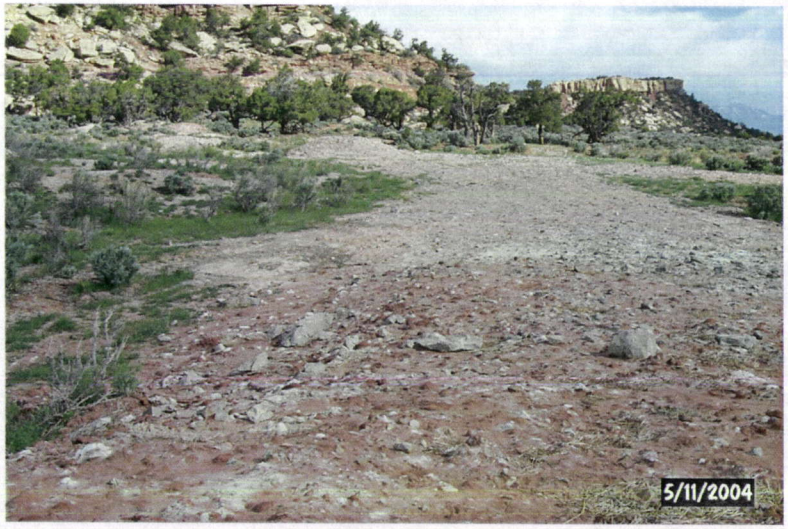


**Photo 6. Area of the reclaimed vent shaft on top of the plateau.**


**Photo 7. The road leading to the vent shaft shown in Photo 6. The soil seems to have made a vast difference in the amount of reestablished vegetation.**